

Lot 38 Montario Quarter, Shenton Park

Waste Management Plan

5 July 2019

Rev_1

5 July 2019

Lot 38 Montario Quarter

DEPARTMENT OF PLANNING, LANDS AND HERITAGE	
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waste less, achieve more

Encycle Consulting Pty Ltd

ABN 41 129 141 484

Level 1, 76 Roberts St
Osborne Park WA 6017
PO Box 6044
East Perth WA 6892

t: +61 8 9444 7668

hadkins@encycle.com.au

www.encycle.com.au

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Glossary of terms and acronyms

Cart	Wheeled, open top bin often used for bulky items such as cardboard
Commingled recycling	Common recyclables, mostly packaging; such as glass, plastics, aluminium, steel, liquid paper board (milk cartons). Commingled recycling may include paper but often, and particularly in offices, paper and cardboard are collected separately.
Compactor	In commercial buildings, industrial compactors are used to literally 'compact' or compress the waste material into a smaller volume to allow for optimal use of space.
General Waste	Material that is intended for disposal to landfill (or in some States, incineration), normally what remains after the recyclables have been collected separately.
MGB	Mobile Garbage Bin – A wheeled bin with a lid often used for kerbside collection of waste or recyclables. (Often called a 'wheelie bin').
MRB	Mobile Recycling Bin – A wheeled bin ("wheelie" bin) with a lid often used for kerbside collection of recyclables (similar to an MGB). Generally have a different colour body and/or lid to MGBs.
Organic waste	Separated food and/or 'green' material (e.g. grass clippings or vegetation prunings).
Recyclable	Material that can be collected separately from the general waste and sent for recycling. The precise definition will vary, depending upon location (i.e. systems exist for the recycling of some materials in some areas and not in others).
Recycling	Where a material or product undergoes a form of processing to produce a feedstock suitable for the manufacture of new products.
Reuse	The transfer of a product to another user, with no major dismantling or processing required. The term "reuse" can also be applied in circumstances where an otherwise disposable item is replaced by a more durable item hence avoiding the creation of waste (e.g. using a ceramic coffee mug in place of disposable cups).

1 Introduction

This Waste Management Plan (WMP) has been prepared for Fini Group for the Development Application for the proposed mixed use, multi-residential and commercial development at Lot 38 Montario Quarter, Shenton Park.

The proposed development will consist of 81 residential apartments, 342 m² food and beverage, 522 m² of commercial office and 568 m² of retail floor space.

This WMP has been prepared based on the following information:

- Architectural plans provided by MJA (28 June 2019) and Fine Spun Architects (28 June 2019)
- WALGA Commercial and Industrial Waste Management Plan Guidelines 2016
- Landcorp Montario Quarter Design Guidelines (September 2017)
- Guidance from City of Nedlands on waste and recycling generation rates and collection frequencies:
 - Phone discussion with Chaminda Mendies on 18/09/2018
 - Meeting with City of Nedlands 5/10/18
 - Phone discussion with Chaminda Mendies on 20/11/18
 - DRP meetings held 6 November 2018, 2 April 2019, 7 May 2019 and 28 May 2019.

1.1 Context

For efficient and effective waste management, the collection and centralisation of waste and recyclables should be carefully considered at the building design phase. Key factors to consider at the design phase include:

- The volumes of waste and recyclables likely to be generated during operation
- Size of bin storage area
- Safety for all operatives involved in waste management
- Access to bins and storage areas from within the building
- Access for trucks for waste collection
- Local council requirements
- Amenity (odours and noise)
- The ongoing management of waste and recycling services

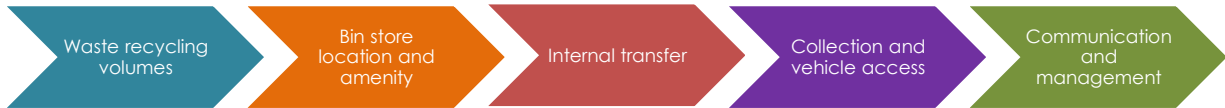
1.2 Key components of the WMP

This WMP consists of five core components. The following report will present detailed information on each of the following components.

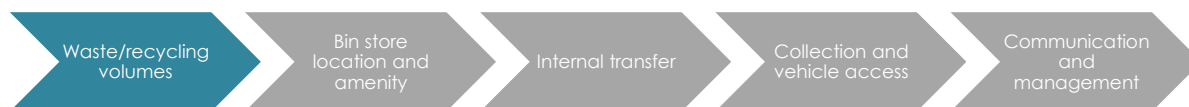
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2 Estimated waste and recycling volumes



2.1 Local government requirements for waste volumes and bin type

The City of Nedlands requires that residential bin numbers are based on the following generation rates:

- General waste: 120 L per week per dwelling
- Recycling: 120 L per week per dwelling

The City of Nedlands provide a weekly service for waste and recycling for multi-unit developments.

For the commercial tenancies, the WALGA Guidelines for Commercial and Industrial Developments have been applied. Encycle's experience and knowledge of the use of the development is also used to calculate the generation of waste and recyclables. The WALGA waste generation rates do not include a breakdown of material streams included in the 'recycling' stream. The final column presents Encycle Consulting's in-house estimate of the material streams present in the recycling stream based on our working experience of operational buildings in Perth.

Premises type	Waste generation rate	Recycling generation rate	Percentage breakdown of recycling stream by material
Office	10 L /100m ² /day	10 L /100m ² /day	79% paper 14% cardboard 2% soft plastics 7% commingled
Food and Beverage	670 L /100m ² /day	130 L /100m ² /day	50% cardboard 40% commingled 20% cooking oil 20% organics 10% soft plastics 100% glass (in addition)
Retail	50 L /100m ² /day	50 L /100m ² /day	50% cardboard 25% commingled 25% soft plastics

2.2 Number and type of bins required for development

2.2.1 Residential

The number of 1, 2 and 3 bedroom apartments for each residential building within this development are set out in tables 1, 2 and 3. The total number of apartments across the development is 81.

Table 1: Number of 1, 2 and 3 bedroom apartments in Building A (northern building)

Number of bedrooms	No. of apartments
1 Bedroom	-
2 Bedroom	2
3 Bedroom	13
Total apartments	15

Table 2: Number of 1, 2 and 3 bedroom apartments in Building B (western building)

Number of bedrooms	No. of apartments
1 Bedroom	3
2 Bedroom	14
3 Bedroom	10
Total apartments	27

Table 3: Number of 1, 2 and 3 bedroom apartments in Building C (southern building)

Number of bedrooms	No. of apartments
1 Bedroom	13
2 Bedroom	23
3 Bedroom	3
Total apartments	39

2.2.2 Bin rooms on each floor in Building A, B and C

The approach for handling waste and recycling within each building will follow the same pattern. Each of the three buildings will have 2 x 240L bins (1 for waste, 1 for commingled recycling) in a small bin room on each floor. This will allow residents easy access to dispose of their daily waste and recycling. The bins will be swapped when full with empty bins by the caretaker. A combined centralised bin store for all buildings to hold all waste and recycling bins will be provided on the ground floor.

660L bins for cardboard and bulk waste will be provided in the ground floor bin rooms of each building. The total number of bins provided for each building is presented in Table 4.

Table 4: Total number of bins to be provided for each residential building

	Building A	Building B	Building C	Total bins per waste stream
General Waste (240L)	5	9	14	28
Comingled recycling (240L)	5	9	14	28
Cardboard (660L)	1	1	1	3
Bulk waste (660L)	1	1	1	3

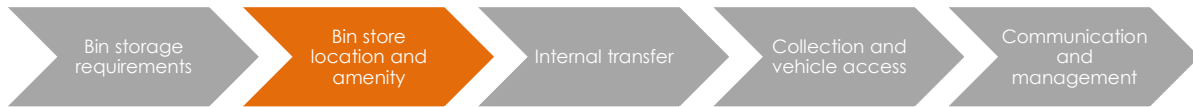
2.2.3 Commercial – food and beverage, retail and office

The bin numbers for the food and beverage, retail and office tenancies, based on 342 m² food and beverage floor space, 522 m² office floor space and 568 m² retail floor space are shown in table 5. These areas are the waste generating areas within the development.

Table 5: Number of waste and recycling bins for food & beverage, retail and office tenants

	Bin size (L)	Number of bins	Collection frequency
General waste (F&B/retail)	660L	4	Daily
General waste (Office)	240L	1	Daily
Commingled recycling (F&B/retail)	240L	2	Daily
Comingled recycling (Office)	240L	1	weekly
Cardboard (shared office and F&B)	1100L	1	Daily
Paper (Office)	240L	1	Daily
Glass (F&B)	240L	2	Daily
Used cooking oil (F&B)	200L	1	As needed
Soft plastic (Shared office and F&B)	240	1	As needed
Polystyrene (shared office and F&B)	660L	1	As needed

3 Bin store location and amenity



3.1 Bin store locations

The building will have three bin stores on the ground floor to allow for the separate storage and collection of:

1. Residential waste and recycling (bin store 1 & bin store 2)
2. Office and food and beverage/retail waste and recycling (bin store 3)

The office waste general waste and recycling will be segregated from the food and beverage and retail general waste and recycling within the one bin store using carefully demarcated areas and appropriate bin signage to ensure separation.

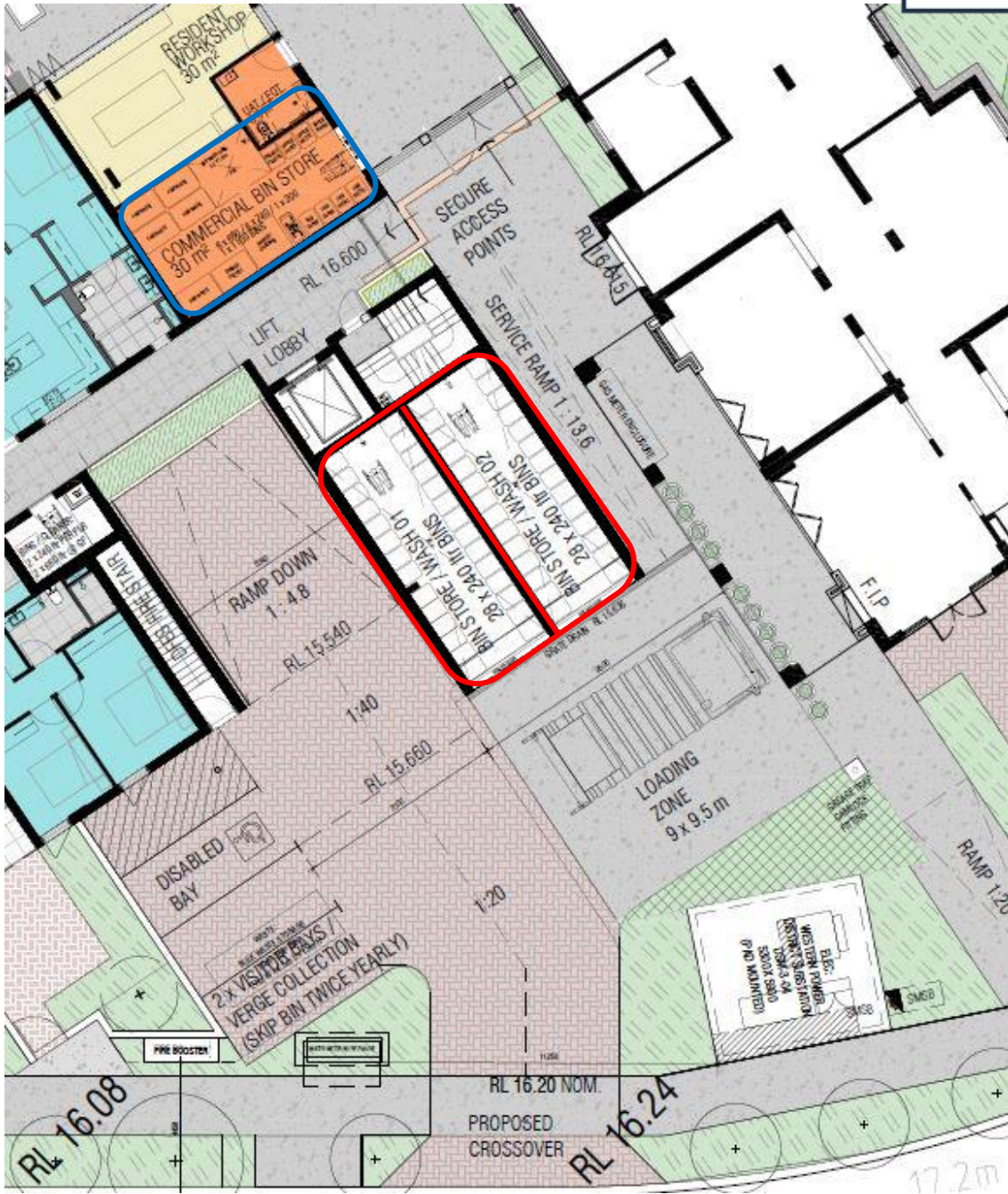


Figure 1: Ground floor plan showing the three bin stores

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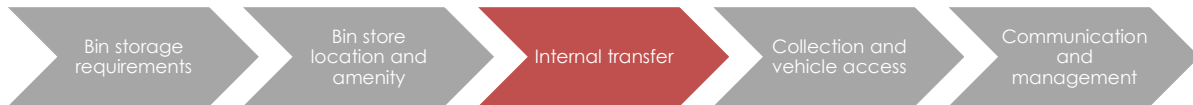


Figure 2: Individual bin rooms on each floor of each building

3.2 Bin store amenity

Bin Transfer	
Aisle door and lift width:	All doors, corridors and lifts on the transfer route are designed for the largest bin to fit through.
General health and safety:	Waste systems are designed to ensure that bins (particularly when full) are not required to be moved over any significant distances, up/down steep ramps and definitely avoid stairs or other potential hazards.
	Manual handling of waste in garbage bags is excluded from the waste management systems where possible.
Bin store	
Washing bins and waste storage area:	Impermeable floors grading to an industrial floor waste (including a charged 'water-trap' connected to sewer or an approved septic system), with a hose cock to enable bins and /or the enclosure to be washed out. 100 mm floor waste gully to waste outlet. Both hot and cold water will be available.
Bin store walls and ceilings:	All internal walls in bin stores will be cement rendered (solid and impervious) to enable easy cleaning. Ceilings will be finished with a smooth faced, non-absorbent material capable of being easily cleaned. Walls and ceilings will be finished or painted in a light colour.
Ventilation and odour:	The design of bin store/s will provide for a system that complies with Australian Standard 1668 (AS1668).
Doors:	Ventilated doors will be specified both internally and externally to enable bins to be easily wheeled into and out of the bin stores.
Vermin:	Roller doors to the bin store/s will be installed to eliminate access by vermin
Lighting:	Bin store/s will be provided with artificial lighting, sensor or switch controlled both internal/external to the room.
Noise:	Noise is to be minimised to prevent disruption to occupants or neighbours.
Fully Enclosed:	The bin store/s will be fully enclosed and only be accessible by residents, tenancy staff and the waste service provider.
Aesthetics:	The bin store/s will be consistent with the overall aesthetics of the development.
Signage:	Visual aids and signage will be provided to ensure that the area works as intended.

4 Internal transfer



4.1 Transfer of waste from apartments to bin storage room

Residents will be responsible for storing waste and recyclables separately within their apartment. The apartment residents will manually transfer waste and recycling to the relevant bins in the bin room on each level.

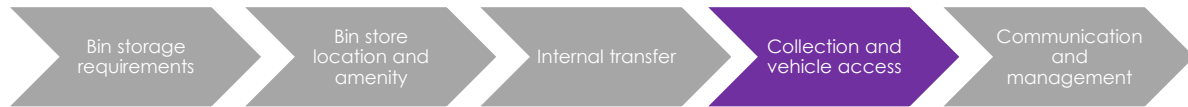
A caretaker will be responsible for ensuring that filled bins are swapped with empty ones on each residential level. The caretaker will transfer filled bins to the residential bin store to await collection.

A bulk bin will be provided in the ground floor bin room for cardboard boxes that are generated from deliveries and residents who are moving in. A bulk general waste bin will be provided in the ground floor bin room for bulky general waste not suitable for disposable in general waste bins on each level.

4.2 Transfer of waste from commercial tenancies

Staff from all commercial tenancies will manually transfer waste and recyclables to the commercial bin store from the ground floor or via the lift. Waste from the hospitality zone will be transferred in a trailer to avoid spillages.

5 Collection and vehicle access



The City of Nedlands will service the residential general waste and recycling bins, while private service providers will undertake the commercial waste and recycling collections.

On collection days rear-lift vehicles for general waste and recycling will enter the site from Thorburn Way. The vehicles will drive in a forwards motion and park in the loading zone to service the full bins. The loading zone is 9.5m in length allowing for operation of the rear-lift vehicle fully within the bay. The service vehicle will then reverse into access driveway before exiting the site in a forwards motion on to Thorburn Way.

With assistance by the caretaker, the operatives will enter the bin stores to retrieve and service the bins via roller doors directly adjacent to the loading zone.

The City of Nedlands will provide a residential bulk waste collection twice a year. During these times a skip bin will be placed in the visitors parking bay opposite the loading zone. On drop-off/collection day, a hook lift vehicle will enter the site from Thorburn Way and drive forward into the loading zone. The vehicle can then reverse straight back to either drop-off or collect the skip bin before driving out on to Thorburn way in a forwards motion.

Commercial waste and recycling will be collected from within the bin store. Operatives will enter the bins store to retrieve and service the bins bringing them down the ramp to the loading zone.

Trade waste from the hospitality zone will be contained within a grease trap located in the basement. Access to the grease trap will be from the Thorburn Way via the loading zone.

Swept path analysis for vehicle ingress and egress has been completed by Flyt taking into consideration the specifications of an 8.8m waste collection vehicle with a 300mm buffer either side of the vehicle (see Figure 2). A swept path analysis has also be undertaken for an 8.6m hook lift vehicle

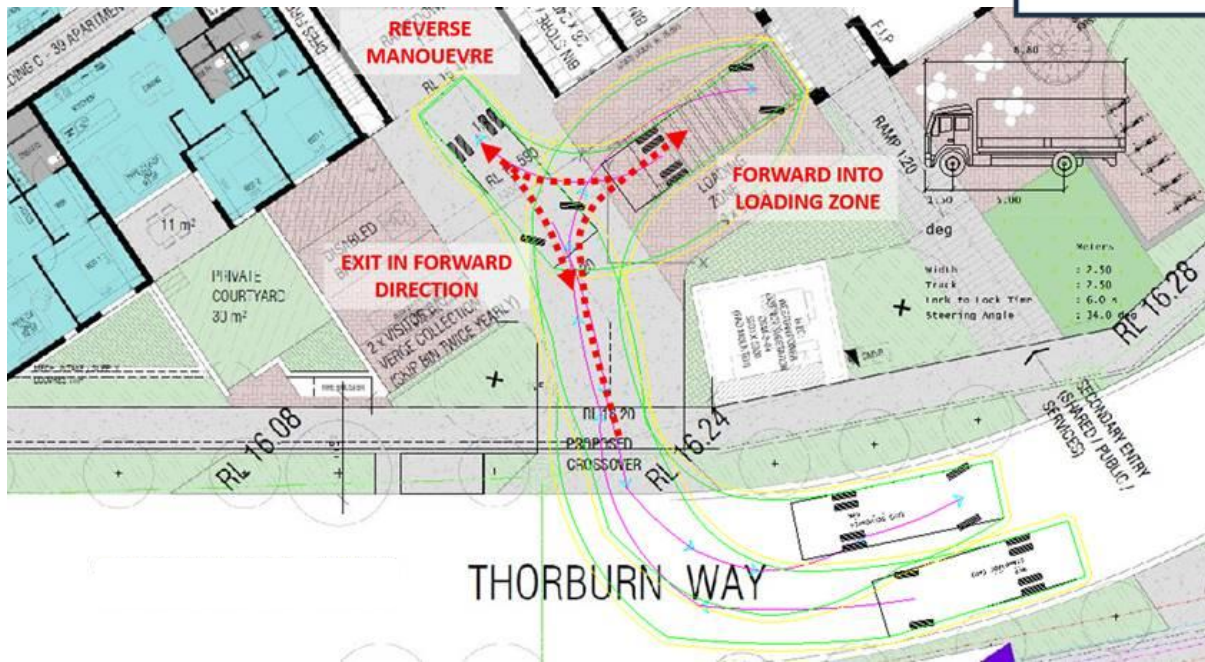


Figure 3: Swept path analysis showing access for 8.8m rear-lift waste collection vehicles

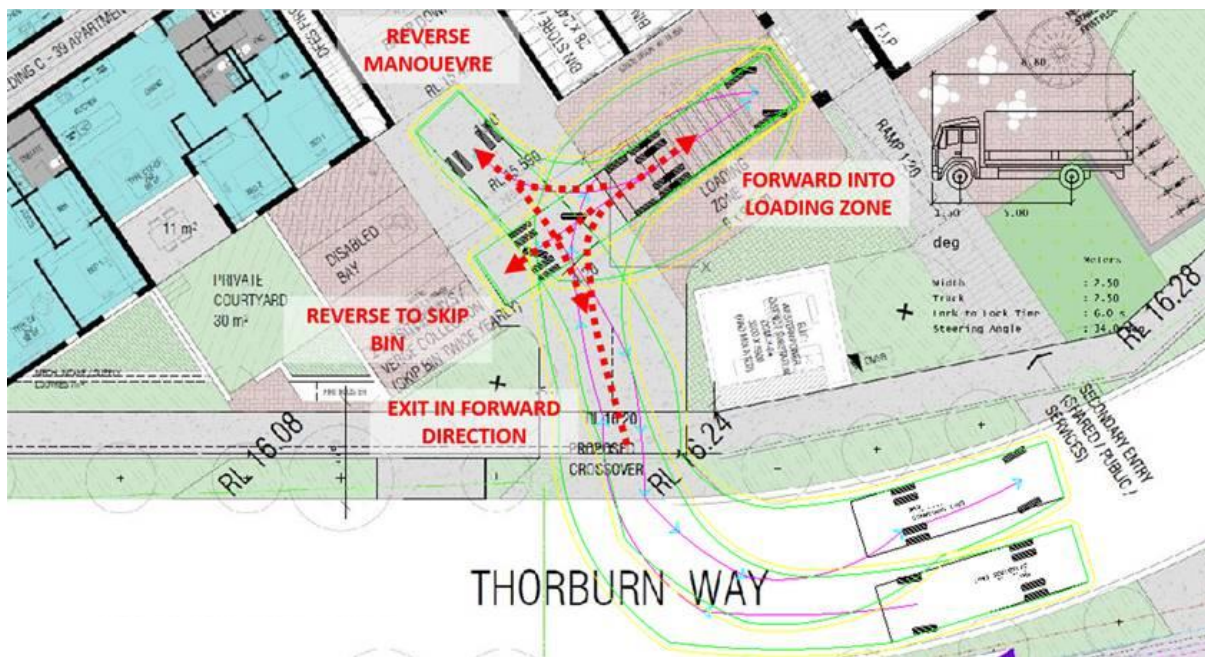
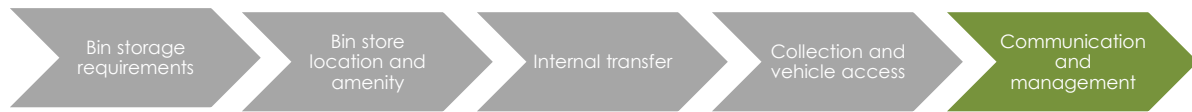


Figure 4: Swept path analysis showing access for 8.6m hook-lift vehicles

6 Ongoing communication and management



6.1 Management

The building caretaker will be responsible for overseeing the waste management systems. The caretaker will be trained and informed about their responsibility to work closely with the private service provider and City of Nedlands regarding the schedule for collection and presentation of bins. The staff member will be responsible for rotating the full bins from each bin room with an empty bin from the ground floor bin store. The caretaker will also maintain the bin store in a clean and tidy condition at all times and ensure bins are washed regularly.

6.2 Communication

All residents and commercial tenants will be made aware through a body corporate document (or equivalent) of the waste and recycling systems and how they should be used. An operational Waste Management Plan suitable for presenting to building users, including how the plan should be communicated will be developed and implemented during both the initial occupation and ongoing management of the building.